

Fire Doors and Smoke Door Assemblies

Section 19.2.2.2.1 of the 2012 edition of the LSC requires compliance with section 7.2.1. Section 7.2.1.15.2 requires compliance with NFPA 80 *Standard for Fire Doors and Other Opening Protectives* (2010 edition), and NFPA 105 *Standard for Smoke Door Assemblies and Other Opening Protectives* (2010 edition), as well as section 8.3.3.1 in the 2012 edition of the LSC for fire doors.

Fire Doors- General

NFPA 80 Chapter 5 *Care and Maintenance* provides the following basic requirements for the annual inspection and testing, which are summarized here:

In cases where a field modification to a fire door or a fire door assembly is desired, the laboratory with which the product or component being modified is listed shall be contacted and a description of the modifications shall be presented to that laboratory. If the laboratory finds that modification will not compromise the integrity and fire resistance capabilities of the assembly, the modifications shall be permitted to be authorized by the laboratory without a field visit from the laboratory.

1. Fire door assemblies are required to be inspected and tested annually, with the written record of the inspection and test to be signed and dated.
2. The functional test of the fire door must be performed by an individual with knowledge and understanding of the operating components of the door being tested. Since the standard does not specify what makes an individual "knowledgeable" or "understanding", then the organization gets to make that determination. Be prepared to justify how you arrived at that determination, and have it documented.
3. Before testing, a visual inspection must be performed on both sides of the door to identify any damage or missing parts that could create a hazard during the test.
4. Inspections must include an operational test to verify that the assembly will close under fire conditions, and the door assembly must be rest after a successful test.
5. Hardware must be examined and any inoperative hardware, parts, or other defects must be replaced without delay.

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6. Tin-clad and kalamein doors must be inspected for dry rot of the wood core.
7. Chains and cables employed must be inspected for excessive wear and stretching.
8. A written record that is signed and dated by the knowledgeable individual performing the inspection must be maintained and made available to the AHJ.

Swinging Fire Doors

On swinging doors, the following must be verified:

1. No open holes or breaks exist in the surfaces of either the door or the frame
2. Glazing, vision light frames, and glazing beads are intact and securely fastened in place
3. The door, frame, hinges, hardware and noncombustible threshold are secured, aligned and in working order with no visible signs of damage
4. No parts are missing or broken
5. Clearances under the bottom of the door cannot exceed $\frac{3}{4}$ inch, and if the door is mounted more than 38 inches above the floor, then the clearance cannot exceed $\frac{3}{8}$ inch. Clearances between the top and vertical edges of the door and the frame cannot exceed $\frac{1}{8}$ inch for wood doors, and must be $\frac{1}{8}$ inch ($\pm \frac{1}{16}$ inch) for steel doors, as measured on the pull side of the door.
6. The self-closing device is operational and the active door must fully close when operated from the full open position
7. If a coordinator is installed, the inactive leaf must close before the active leaf
8. Positive latching hardware operates and secures the door when it is in the closed position
9. Ensure that auxiliary hardware items that interfere with the proper operation of the door are not installed on the door or frame

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10. No field modifications have been made to the door or frame that would void the rated label
11. Where gasketing and edge seals are required, inspect to verify their presence and integrity

Smoke Door Assemblies

NFPA 105 Chapter 5 *Maintenance* provides the following basic requirements for the annual inspection and testing.

The following actions and functions must be verified on smoke compartment door assemblies:

1. Smoke door assemblies must be inspected annually.
2. Doors must be operated to confirm full closure.
3. Hardware and gaskets shall be inspected annually. (if any parts found to be damaged or inoperative must be replaced)
4. Tin-clad and kalamein doors shall be inspected for dry rot of the wood core.
5. A written record that is signed and dated by the knowledgeable individual performing the inspection must be maintained and made available to the AHJ.
6. Records must be maintained for at least 3 years.